

MURF1220CT

Rev.F Mar.-2016

/ Descriptions

Ultrafast Recovery Diode in a TO-220F Plastic Package.

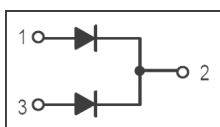
/ Features

Silicon epitaxial process to produce ultrafast recovery diode with low reverse leakage current and high reliability.

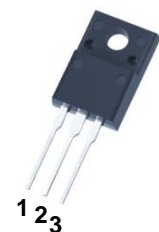
/ Applications

For high frequency, high voltage, high current rectifier diode, freewheeling diode.

/ Equivalent Circuit



/ Pinning



PIN1 Anode PIN 2 Cathode PIN 3 Anode

/ h_{FE} Classifications & Marking

See Marking Instructions

/ Absolute Maximum Ratings(Ta=25)

| Parameter | Symbol | Rating | Unit |
|-------------------------------------|---------------|---------|------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 200 | V |
| RMS Voltage | V_{RMS} | 140 | V |
| DC Blocking Voltage | V_{DC} | 200 | V |
| Average Forward Current | I_F | 2×6 | A |
| Non Repetitive Peak Surge Current | I_{FSM} | 100 | A |
| Thermal Resistance Junction to Case | R_{Jc} | 3.3 | /W |
| Storage Temperature Range | $T_j T_{stg}$ | -55~150 | |

/ Electrical Characteristics(Ta=25)

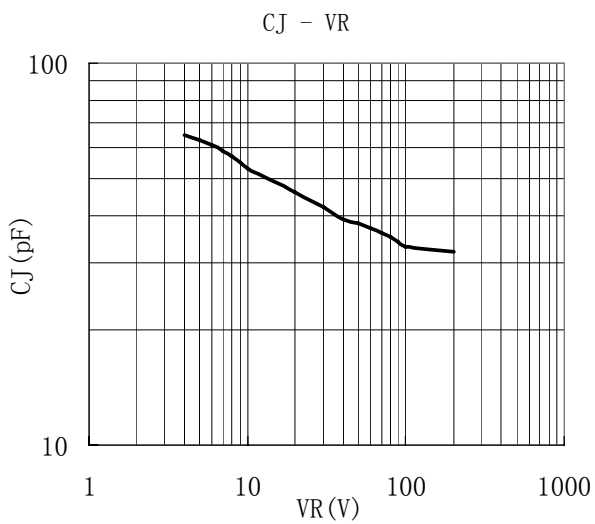
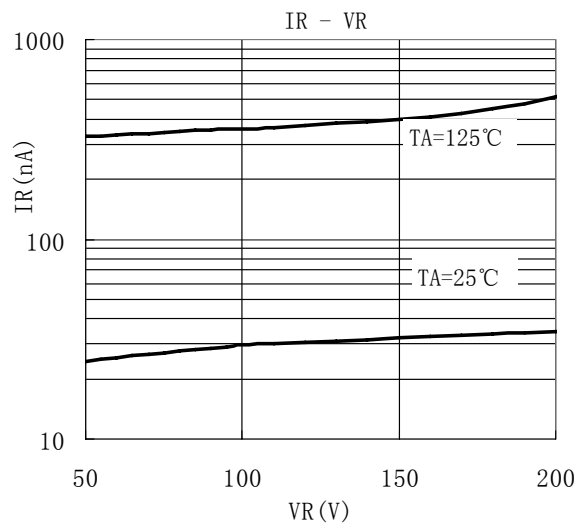
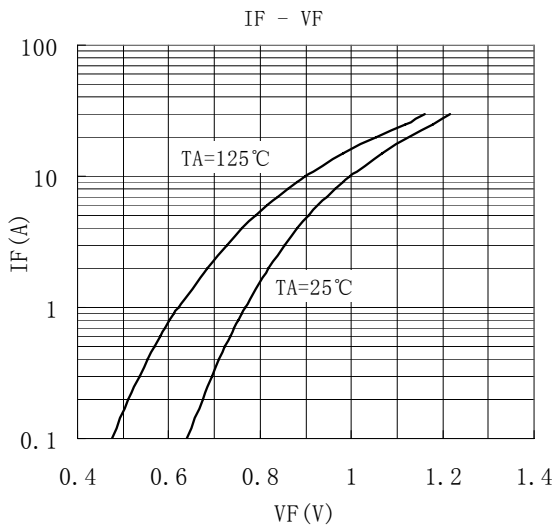
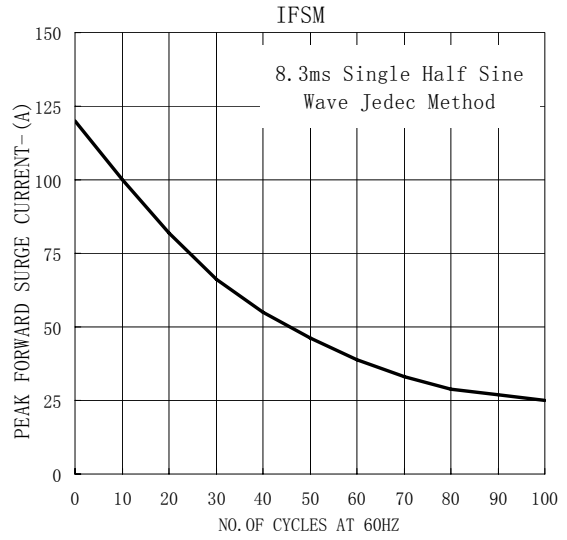
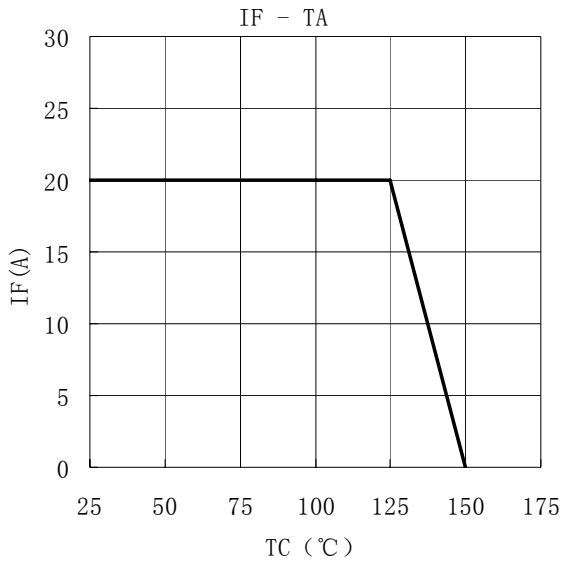
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-------------------------------|----------|--|-----|------|-----|------|
| Forward Voltage | V_F | $I_F=2A$ $T_c=25$ | | 0.82 | | V |
| | | $I_F=2A$ $T_c=125$ | | 0.68 | | V |
| | | $I_F=6A$ $T_c=25$ | | 0.92 | 1.0 | V |
| | | $I_F=6A$ $T_c=125$ | | 0.82 | 0.9 | V |
| Instantaneous Reverse Current | I_R | $V_R=200V$ $T_a=25$ | | | 10 | A |
| | | $V_R=200V$ $T_a=125$ | | | 150 | A |
| Reverse Recovery Time | t_{rr} | $I_R=1.0A,$ $I_F=0.5A$ $I_{RR}=0.25A$ | | | 35 | ns |

/Notes:

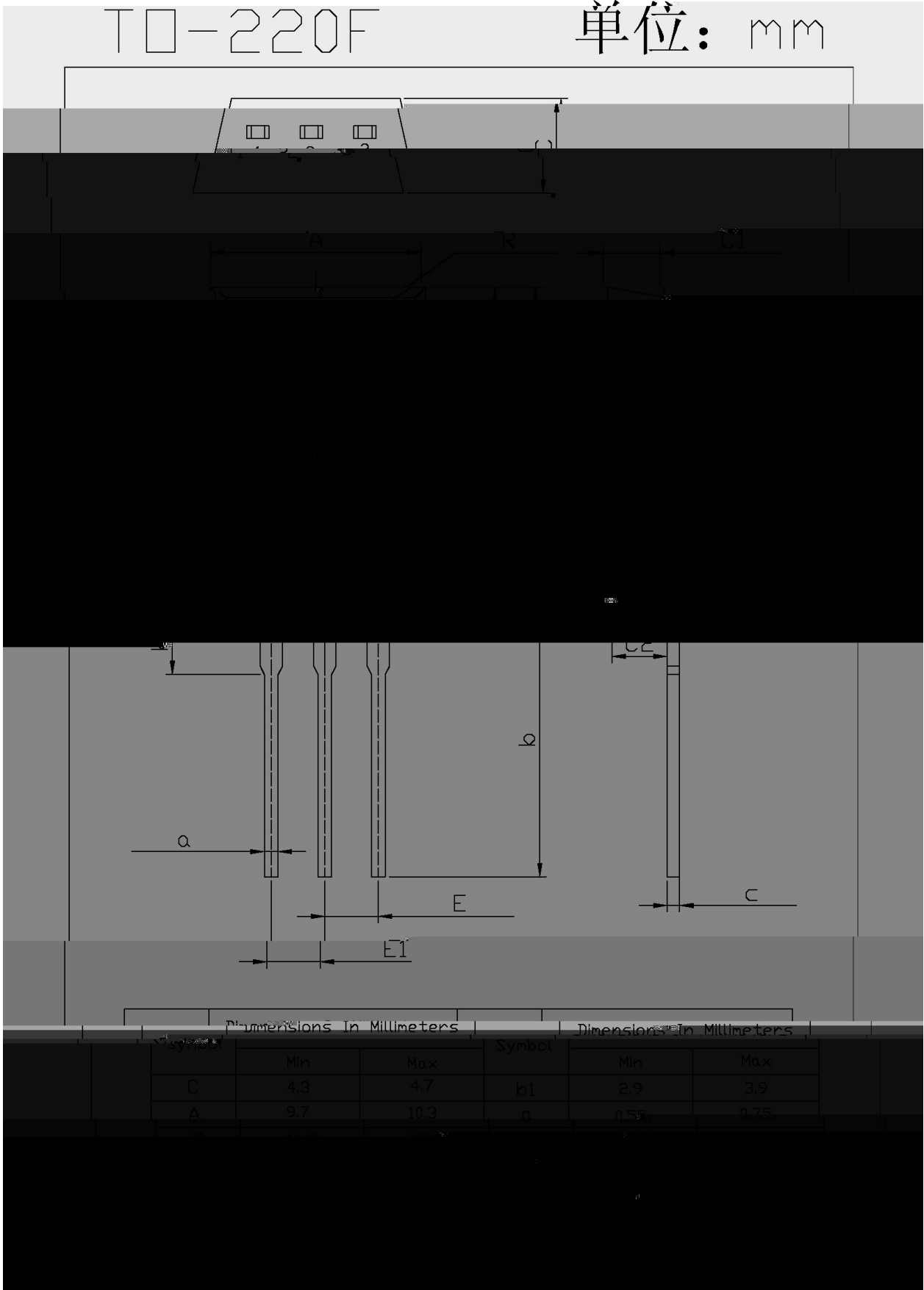
1. /Short duration pulse test used to minimize self-heating effect.

2. / Unless otherwise noted, values for the parameters of a single chip

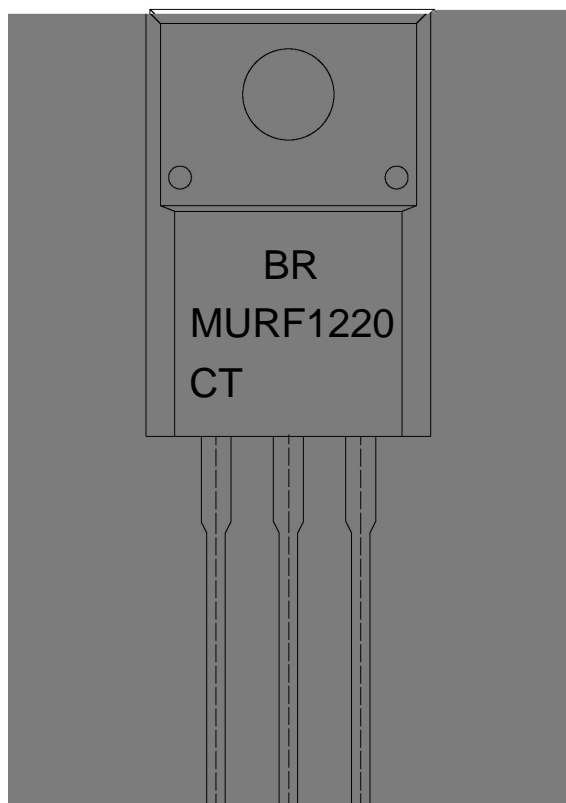
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



Note:

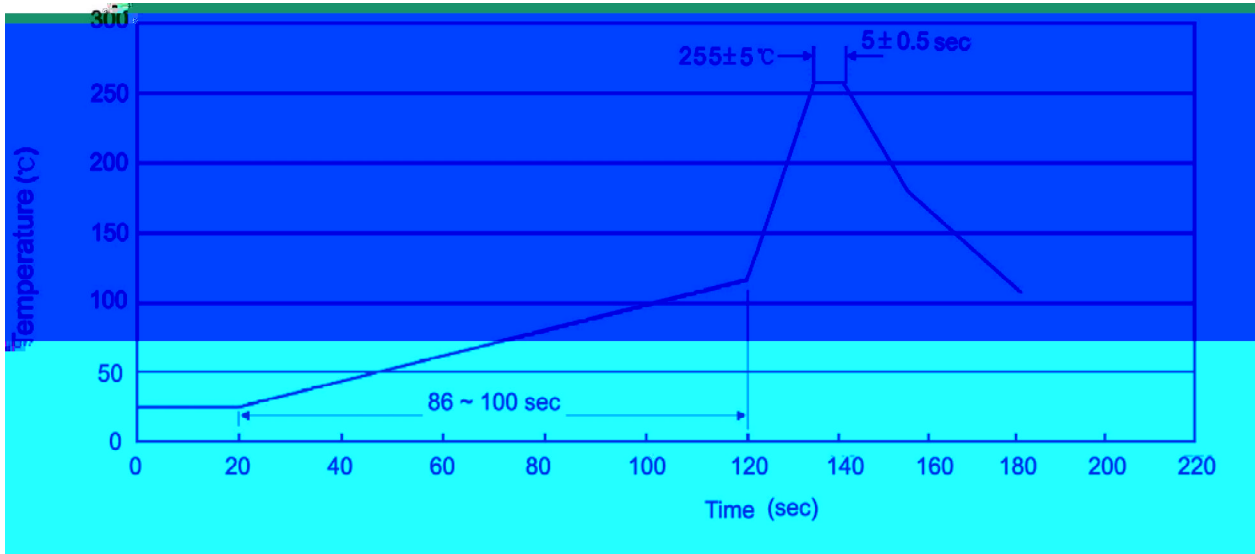
BR: Company Code

MURF1220: Product Type.

CT: Internal Structure

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-----|-----|----|----------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255 | 5 | 5 | 0.5sec; | 2.Peak Temp.:255 5 , Duration:5 0.5sec. |
| 3 | | | 2 | 10 /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270 5 10 1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|------------|----|----|----|----|---|---|---|
| | 只袋 | 袋盒 | 只盒 | 盒箱 | 只箱 | 袋 | 盒 | 箱 |
| | | | | | | | | |

/ TUBE

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|------------|-----|----|----|----|---|---|---|
| | 只套管 | 套管盒 | 只盒 | 盒箱 | 只箱 | 套管 | 盒 | 箱 |
| | | | | | | | | |

/ Notices